3-2017

Mutations: Evolution's Disappointment

Georgia (Hickman) Purdom
Cedarville University

MUTATIONS: EVOLUTION'S DISAPPOINTMENT

By Georgia (Hickman) Purdom '94

Evolutionists claim that, given enough time, anything is possible. Microbes can transform into microbiologists if you just wait billions of years! They rule out any supernatural acts of the Creator God and instead depend on time and change. Many evolutionists would claim time is the key, but I would argue that a mechanism for change — something orchestrating the change — is more important. All the time in the world will not cause organisms to undergo the large-scale changes necessary to transform them from one kind into a completely different kind.

HOW DO CHANGES IN ORGANISMS OCCUR?

The root source of differences between any two organisms is found in their DNA. Some DNA may be the same because the bodies of the organisms must perform similar tasks, but there are many, many differences. DNA is a repository, much like a library, that encodes information for the organism's proteins that build, grow, and maintain that life-form's physical body. DNA is composed of four bases: adenine (A), cytosine (C), guanine (G), and thymine (T), arranged in a specific sequence. Changes in the sequence of these bases are known as "mutations" and can come in many forms, including the deletion, addition, or rearrangement of bases. For evolution to be true, many mutations would have had to take place, and the type of mutations would necessitate the organism's physical form undergoing dramatic change over long periods of time.

One of the most popular examples of mutations (and often touted as "evolution in action") is the development of antibiotic-resistant bacteria. Antibiotics are given to kill bacteria-causing infection and disease. However, bacteria have developed defenses against antibiotics over time, enabling them to survive medicines that would have killed them previously. This is a very serious concern in the health care field as some bacteria have become resistant to multiple antibiotics (e.g., methicillin-resistant Staphylococcus aureus, or MRSA), leaving doctors with no arsenal to treat patients.

The point is this: mutations, instead of being the missing piece in the evolutionary puzzle, are typically destructive, or at least not supportive of directional change.

Bacteria develop resistance through mutations in their DNA. Some scientists have termed these "beneficial" mutations. They aren't saying that it's "beneficial" for bacteria to exist that can survive antibiotic treatment; they're speaking from a scientific mindset. With antibiotic resistance, the mutation is beneficial because it facilitates the organism's ability to prevail in spite of the effort to eradicate it. I would agree with that conclusion to a certain extent. These mutations are beneficial for bacteria living in an environment where adapting is advantageous, such as a hospital or nursing home where antibiotics are used heavily. However, are these mutations really beneficial for that organism overall?

Mutations always come at a cost. In this case, the bacteria gain the ability to resist the antibiotic, but they have done so while losing or altering their ability to do something else. For example, Helicobacter pylori, the bacteria responsible for ulcers, produces a protein (we'll call it the N protein for short) that is important for the bacteria's metabolism. One of the antibiotics given for H. pylori infections targets this protein. The N protein converts the antibiotic into a poison, and the bacteria die. Sadly, the overuse and abuse of antibiotics in some countries have led to the development of antibiotic-resistant H. pylori. These H. pylori have a mutation that makes them unable to produce the N protein. When the antibiotic is given to individuals for treatment, the N protein is not present in the bacteria, so they don't convert the antibiotic into a poison and they survive.

The mutation and the subsequent resistance have come at a cost. The bacteria no longer produce the N protein that is needed for normal metabolism. Sometimes other bacterial proteins can perform the missing function, but usually not as well. The resistant bacteria survive well in a health care setting (where there is heavy antibiotic usage) because there is limited competition (fewer bacteria) for the limited nutrients in their environment. Outside of that setting, the resistant bacteria are at a disadvantage because they cannot perform normal functions as well and can be outcompeted by bacteria able to make the N protein. What we learn is that mutations can be beneficial in certain environments but, overall, it's really a trade-off resulting in no overall benefit or net gain for the bacteria.

The point is this: mutations, instead of being the missing piece in the evolutionary puzzle, are typically destructive, or at least not supportive of directional change, as we see with just this one example (and there are many more I could share!). This is true for the vast majority of mutations; they destroy information encoded in the DNA.

HOW ARE MUTATIONS A PROBLEM FOR EVOLUTION?

Evolutionists believe that numerous mutations, accumulated over long periods of time, have led to the evolution of all life from a single-celled common ancestor. In order for human life to have evolved from this ancestor, mutations would have to change the DNA so the organism would eventually make brains, eyes, and ears (just to name a few!). But mutations are destructive, as we've seen with antibiotic-resistant bacteria, and simply cannot make the kinds of changes evolution requires.

Let's look at the popular evolutionary idea that dinosaurs evolved into birds. I once watched an

animated video that showed a small dinosaur running across the ground. As the dinosaur ran, it grew feathers, and then wings, and then jumped off a cliff and flew, and eventually evolved into a bird you might see in your backyard. This evolutionary belief has become so widely accepted that birds are now classified as reptiles! The video represented the changes that had to occur in dinosaurs over millions of years. Although it looks "simplistic" on the screen, reality is very different. I look at the video as a geneticist and know that for every physical change we see in the dinosaur, hundreds to millions of mutations would have to occur to make that possible. These mutations would have to add information about how to make new structures like feathers — something that has never been observed!

Consider the following analogy as we try to visualize the problems of mutations for evolution: You are standing at the far end of your backyard and you want to get to your house, but you must walk a straight line (you can't circle around the earth) and you can only take steps backward (away from the house). Even if you are given millions of years to accomplish this task, will you ever reach your house? No! The same is true for evolution. Evolutionists can have billions and trillions of years to make evolution work, but it will always fail because there is no mechanism to make the types of changes in organisms that evolution requires.

ARE MUTATIONS A PROBLEM FOR BIBLICAL CREATION?

Genesis 1 is clear that God's original creation was "very good" (Gen. 1:31). There was no death, suffering, or disease, nor mutations, that could lead to such outcomes. In Genesis 3, Adam and Eve sinned, and the punishment for sin was death (Gen. 2:17; 3:19). After the fall, God no longer upheld the world in the same way, and mutations began to occur, bringing death, disease, and suffering.

The Bible says that God created animals according to their "kind" (Gen. 1:11–12, 21, 24–25), which most creation scientists believe is around the family level in modern classification schemes. For example, at Answers in Genesis' newest attraction, the Ark Encounter, we showcase the dog kind, horse kind, and cat kind. The inference from the creation and flood accounts is that animals were to reproduce according to their kinds (Gen. 1, 6).

What we observe today is consistent with the biblical account of creation. We see variation within kinds (e.g., multiple species and breeds of dogs in the dog kind/family), a few of which may be caused by mutations (e.g., fur color changes in dogs), but we never observe the types of change that will cause a dog to evolve into a cat, or anything else for that matter. And we never will, no matter how much time passes, because there is no genetic mechanism for this type of change.

WHY DOES IT MATTER THAT THE BIBLE IS TRUE CONCERNING GENETICS?

The Bible gives us certain biological principles, even if it doesn't specifically mention the terms "DNA" or "genetics." Our observations about what mutations can and cannot do is absolutely consistent with biblical creation and absolutely inconsistent with the idea of evolution over millions of years. In the church today, there are many who compromise on God's Word in Genesis and choose to believe in man-made (and made-up!) evolutionary ideas. Does it really matter? Is Genesis really that important?

We see variation within kinds (e.g., multiple species and breeds of dogs in the dog kind/family), a few of which may be caused by mutations (e.g., fur color changes in dogs), but we never observe the types of change that will cause a dog to evolve into a cat, or anything else for that matter.

It is. If God didn't tell us the truth concerning how, when, and why He created, why should we trust what He says about anything else? If we just evolved from some shared ancestor with the apes, Adam and Eve weren't real people made in God's image, and the fall never happened; then what is sin, why are we sinners, and why do we need a Savior? Ideas have consequences. As Christians, we need to uphold the truthfulness and authority of the history of Genesis so that we can effectively share the Gospel of Jesus Christ based in that history.

Georgia (Hickman) Purdom '94 *is a speaker, researcher, and author for Answers in Genesis. She earned her Ph.D. in molecular genetics from The Ohio State University.*